



Description

This instrument must be used with the eoProbe sensors and a dedicated software. It operates up to 3 eoProbe directly connected. It converts the optical signal transmitted by the eoProbe into an electrical signal that can be analysed with an instrument like an oscilloscope, a spectrum analyser or any other signal processing instrument. It includes an antenna factor (AF) real-time treatment for measuring absolute electric fields (modulus, phase). Each eoSense is delivered with a calibration certification valid for 2 years.

Main usage precautions

The instrument must not be submitted to mechanical constraints or shocks.
The eoSense must be handle with care.

Applications

E-field measurement in/for:

- Biological environment
- Specific Absorption Rate assessment
- Medium and high voltage systems
- Cold plasmas
- MRI
- Power electronics systems
- Railways
- Any liquid
- Antennas
- And many more

Main features

- Up to 3 eoProbe channels
- Very easy instrument to operate
- Real-time antenna factor correction with exportation of data on a CSV file format
- Integrates a Laser lock key and an interlock to switch off Laser
- Operated by a dedicated software delivered with the instrument

eoSense versions*

Reference	Environment	Option AMP ¹	Accessory eoAcq ²
LF-30S	40Hz...30MHz	-	30Hz...100MHz
MF-01U	1kHz...1GHz	1kHz...1GHz 50dB gain	-
HF-10	100MHz...10GHz	100MHz...10GHz 55dB gain	-
HF-10V	10kHz...10GHz	10kHz...10GHz 30dB gain	-
HF-20	100MHz...20GHz	100MHz...20GHz 45dB gain	-
HF-20V	10kHz...20GHz	3kHz...18GHz 30dB gain	-
HF-40	20kHz...40GHz	100MHz...40GHz 48dB gain	-

*All eoSense instrument integrates a unique channel in standard. 2 or 3 channels in total may be also be proposed in standard. Additional features may be possible during an eoSense upgrade. Special versions may be proposed. Please contact kapteos for more information.

¹ AMP = AMPLifier to increase the signal in case of very low electric field measurement (from 45 to 55dB depending on eoSense version)

² eoAcq = ACQuisition system to record the measured electric field. This option is under development.

Main specifications *

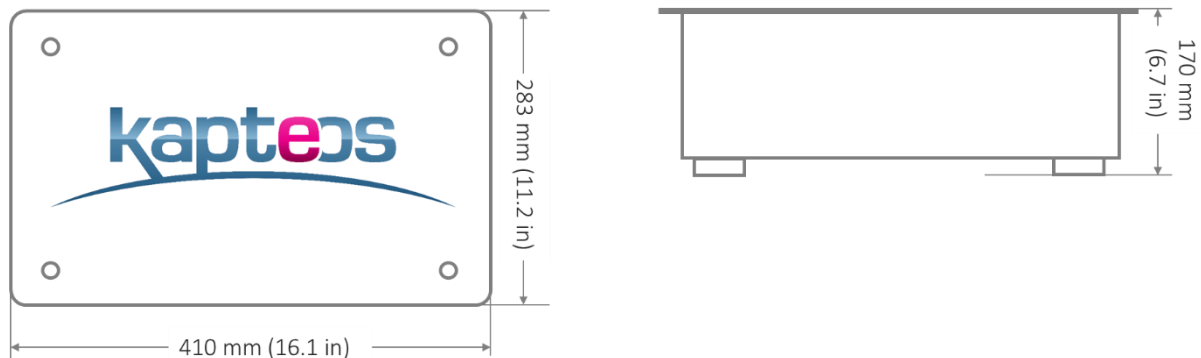
Weight	≈ 9 kg (for 1 channel version without AMP)
Operating temperature	+15 ... +30 °C (59 ... 86 °F)
Relative humidity	≤ 95 % without condensation
Power supply	100 ... 250 V AC – 50 or 60 Hz – 150 W max.
Front panel I/O	eoProbe connector: ruggedized UTS-LC (1/ch) Signal output: 50Ω analog (1/ch) <ul style="list-style-type: none"> • BNC type: LF and MF versions • SMA type: HF-10 version • 3.5mm type: HF-20 version • K female type: HF-40 version Antenna factor correction: BNC type (1/ch) 1 x LED status 1 x Laser on/off key
Rear panel I/O	1 x USB 2.0 port 1 x Ethernet port 1 x Laser interlock adaptor (BNC type connector) 1 x ground screw 1 x Auxiliary female port (not used)

*Values are valid under certain conditions

Content of instrument

- 1 calibrated instrument
- 1 Laser on/off key
- 1 Laser interlock adaptor
- 1 power cord
- 1 USB cable
- 1 software (Linux) installed
- 1 Notebook (Linux)
- 1 user manual
- 1 robust suitcase

eoSense dimensions



Accessories

eoSwitch

Description

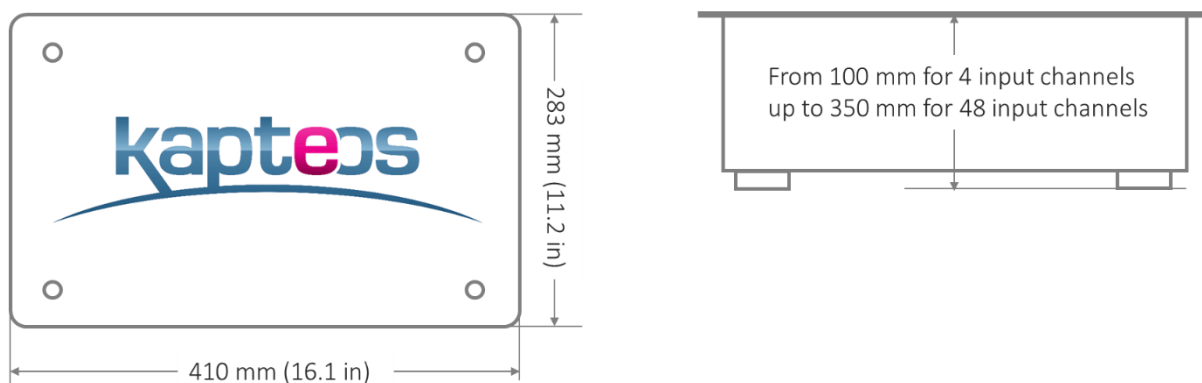
This accessory is an optical switch. It increases the number of probes connected (max. 48 probes) to the instrument.

Main specifications

- Number of input probes : 4, 8, 12, 16, 24, 32 or 48
- Number of output channels : 1 or 2 or 3
- Bandwidth of signal : 10 Hz ... 40 GHz
- Insertion losses : ≤ 3 dB
- Commutation time : 10 msec
- Number of commutations : $> 100\,000\,000$
- Power supply : Provided by eoSense instrument

This accessory is operated by the eoSense software.

eoSwitch dimensions



Fibre optic extension

Description:

The fibre optic extension is inserted between the eoSense instrument and an eoProbe sensor to increase the distance up to a maximum of 100 meters. The length is set with steps of 5 meters, from 5 to 95 meters. Each end of the optic fibre is connected with a ruggedized UTS-LC connector.

The sensitivity of the eoProbe may be reduced between 10 to 15%.



Reference: eoP-EXT

Services

Calibration

New calibration of eoSense instrument (with its eoProbe) is requested to be performed at Kapteos every 2 years.

Rental

Rental of an eoSense (with a minimum of one eoProbe) is based on a quote from Kapteos.

Standard rental period is from 1 week to 4 weeks.

Contact us

Kapteos SAS
Bâtiment CleanSpace
354 voie Magellan
73800 Sainte-Hélène du Lac
France

contact@kapteos.com

Tel: +33 (0)4 79 62 88 34

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